

REMARKS

The Examiner's Office Action of July 20, 2004 has been received and its contents reviewed. The Applicants wish to thank Primary Examiner Hurley for the courtesy of conducting a telephone interview on August 19, 2004 concerning the requirement for an election of specie set out in the July 20th Office Action. With the election of Specie (Group) I, directed to Embodiment Mode 1, which is set forth at pages 10-13 of the specification and in Figures 1A-1C, claims 6-22 and 28-44 are regarded as readable thereon; while claims 1-5 and 23-27 are regarded as generic to all claims. Accordingly, claims 1-65 remain pending for consideration, of which claims 45-65 are withdrawn as being directed to non-elected specie.

Please note that the claims 6-22 and 28-44 which are readable upon Specie (Group) I are directed to Embodiment Mode 1. Embodiment Mode 1 includes, in addition to the "adding a metal...", "crystallizing the semiconductor", "forming a mask...", "forming an impurity region...", and "segregating the metal..." of either independent generic claims 1 or 23, the additional steps of "irradiating..." or "removing..." or both "irradiating..." or "removing..." which are set forth in the independent claims 6, 12, 17, 28, 34 and 39 readable on the claim Specie (Group) I. See the specification, at pages 10-13 for an elaboration of each step set forth in the independent claims 6, 12, 17, 28, 34 and 39 of those claims readable on the claim Specie (Group) I.

It is further pointed out that even though independent claim 23 contains the additional step of "forming a mask..." whereas claim 1 does not contain such a step, it is noted that each of the independent claims 1 and 23 are still generic to all the steps set forth the Specie (Groups) I-VIII set forth by the Examiner and in particular are generic to claims 6-22, 28-44 readable on the Specie (Group) I and to claims 45-65 readable on the Specie (Group) III – Embodiment Mode 3. Finally, it is pointed out the generic claims 23-27 cannot be specie belonging to the Specie (Group) II – Embodiment Mode 2, since the Embodiment Mode 2 of the specification requires "masking" prior to "crystallizing" while independent claim 23 has no "masking" step

set forth before “crystallizing.” However, these claims 1 and 23 may still be patentably distinct from one another.

In view of these actions and the following remarks, reconsideration of the requirement for an election of species and examination of this application is now requested.

The Applicants respectfully traverse the requirement for a specie election with regard to both the failure of the Examiner to meet the “serious burden” requirement of MPEP Chapter 803 and the failure to establish that the various specie of encompassed by the claims are “patentably distinct” as is required by MPEP Chapters 803 and 808.01(a).

While the Applicants readily admit that an Examiner can require a restriction or specie election at any point in the prosecution of the examination of an application, that requirement must be consistent with the procedures and guidelines set forth in MPEP Chapter 800. In that regard, the Examiner has not established the most basic MPEP Chapter 800 requirements for setting forth a proper requirement for an election of specie. That is, the Examiner has not established a “serious burden” to conduct the search and examination on all the claims 1-65. This is evidenced by the very fact that the Examiner has exhaustively searched claims 1-65 on many occasions, for example, a text search was conducted on:

USPTO Text search 6/2/03	USPTO Text search 6/3/03
USPTO Text search 6/5/03	USPTO Text search 6/6/03
USPTO Text search 6/7/03	USPTO Text search 6/8/03
USPTO Text search 6/10/03	USPTO Text search 6/15/03 (all attached)

Further, a classified search of all sub-classes in Class 438 related to the claims 1-65 was conducted on:

USPTO Image search 6/14/03 (attached)

After concluding these searches the Examiner issued an extensive seventeen page Office Action on June 18, 2003 in which “[C]laims 1-65” (collectively) were rejected under § 102 as being anticipated by Makita et al. (‘003).

Thereafter, upon the Applicants filing an Amendment to each independent claim adding “containing the...noble gas element”, the Examiner then conducted another extensive classified and text search on November 20, 2003 (attached), and issued another Office Action on December 15, 2003 in which “[C]laims 1-65” (again collectively) were rejected under § 103 as being obvious in view the combined teachings of Makita et al. ('003) and Ueda et al. ('259). Note also, the following Amendment of April 15, 2004 only corrected grammatical errors to several claims.

Since the Examiner has already performed several extensive searches and examination of all the claim 1-65 which have remained essentially the same (in terms of the search required) through two previous Office Actions on the merits, the present requirement for an election of specie fails to satisfy the “serious burden” requirement of MPEP Chapter 803 by setting forth any reason for now asserting that further any search/examination is a “serious burden”, i.e., the substantial bulk of the searching and examination has already been done by the examiner.

In summary, the Applicants urge that the requirement for an election of specie is improper in failing to establish a “serious burden” of continued search/examination (MPEP Chapter 803). Consequently, the Applicants respectfully request that the election of specie requirement be withdrawn and all the claims examined, or, at the very least, that claims 1-5, 23-27 be indicated as generic to the elected Specie I and examined with claims 6-22 and 28-44 which read upon the elected Specie I.

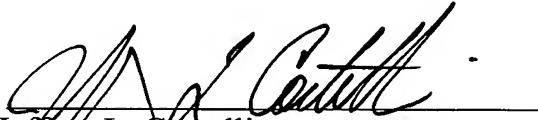
While the Applicants believe the claims are now in condition for examination and allowance, should the Examiner believe a conference would be of benefit in expediting the prosecution of the instant application, the Examiner is hereby invited to telephone counsel to arrange such a conference.

Lastly, it is noted that a separate Extension of Time Petition (two months) accompanies this response along with an authorization to charge the requisite extension of time fee to Deposit Account No. 19-2380 (740756-2410). However, should that petition become separated from this Amendment, then this Amendment should be construed as containing such a petition. Likewise, any overage or shortage

in the required payment should be applied to Deposit Account No. 19-2380 (740756-2410).

Respectfully submitted,

By:



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SEARCH			
Class	Sub.	Date	Exmr.
438	164	6/14/03	SDI
	143		
	149		
	310		
	311		
	471		
	482		
	488		
	761		
	762		
	765		
	778		
438	486	6/14/03	SDI

(List databases searched. Attach search strategy inside.)

	Date	Exmr.
<p>7-11</p> <p>namer, 2-2</p> <p>EAST</p>	6/14/03	SDF

INTERFERENCE SEARCHED			
Class	Sub.	Date	Exmr.

	Search text	DB	Time stamp
6009	((438/143) or (438/149) or (438/310) or (438/311) or (438/471) or (438/482) or (438/488) or (438/761) or (438/762) or (438/763) or (438/764) or (438/765) or (438/778)).CCLS.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/06/05 18:08
1	((438/143) or (438/149) or (438/310) or (438/311) or (438/471) or (438/482) or (438/488) or (438/761) or (438/762) or (438/763) or (438/764) or (438/765) or (438/778)).CCLS.) and metallic and ((second and first) adj (semiconductor (film\$1 or layer\$1))) and amorphous and crystall\$4 and (barrier adj (layer or film)) and (inert adj gas\$2)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/06/05 18:40
0	((438/143) or (438/149) or (438/310) or (438/311) or (438/471) or (438/482) or (438/488) or (438/761) or (438/762) or (438/763) or (438/764) or (438/765) or (438/778)).CCLS.) with metallic and ((second and first) adj (semiconductor (film\$1 or layer\$1))) and amorphous and crystall\$4 and (barrier adj (layer or film)) and (inert adj gas\$2)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/06/05 18:16
1	((438/143) or (438/149) or (438/310) or (438/311) or (438/471) or (438/482) or (438/488) or (438/761) or (438/762) or (438/763) or (438/764) or (438/765) or (438/778)).CCLS.) and (metallic or(metal\$4 adj clusters)) and ((second and first) adj (semiconductor (film\$1 or layer\$1))) and amorphous and crystall\$4 and (barrier adj (layer or film)) and (inert adj gas\$2)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/06/05 18:18
1	((438/143) or (438/149) or (438/310) or (438/311) or (438/471) or (438/482) or (438/488) or (438/761) or (438/762) or (438/763) or (438/764) or (438/765) or (438/778)).CCLS.) and (metallic or(metal\$4 adj (cluster\$1 or element\$1))) and ((second and first) adj (semiconductor (film\$1 or layer\$1))) and amorphous and crystall\$4 and (barrier adj (layer or film)) and (inert adj gas\$2)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/06/05 18:20
1	((438/143) or (438/149) or (438/310) or (438/311) or (438/471) or (438/482) or (438/488) or (438/761) or (438/762) or (438/763) or (438/764) or (438/765) or (438/778)).CCLS.) and (metallic or(metal\$4 adj (cluster\$1 or element\$1))) and ((second and first) adj (semiconductor (film\$1 or layer\$1))) and amorphous and crystall\$4 and (barrier adj (layer or film)) and (inert adj gas\$2)and getter\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/06/05 18:22
3	(metallic or(metal\$4 adj (cluster\$1 or element\$1))) and ((second and first) adj (semiconductor (film\$1 or layer\$1))) and amorphous and crystall\$4 and (barrier adj (layer or film)) and (inert adj gas\$2)and getter\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/06/05 18:25
647766	(metallic or(metal\$4 adj (cluster\$1 or element\$1)))	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/06/21 16:52
0	(metallic or(metal\$4 adj (cluster\$1 or element\$1))) and ((second and first and third) adj (semiconductor (film\$1 or layer\$1))) and amorphous and crystall\$4 and (barrier adj (layer or film)) and (inert adj gas\$2)and getter\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/06/05 18:48

	0	(metallic or(metal\$4 adj (cluster\$1 or element\$1))) and ((second.and first and third) adj (semiconductor (film\$1 or layer\$1))) and amorphous and crystall\$4 and (barrier adj (layer or film)) and (inert adj gas\$2 adj element) and getter\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/06/05 18:30
	23348	((second and first and third) adj (semiconductor (film\$1 or layer\$1)))	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/06/05 18:34
	0	((metallic or(metal\$4 adj (cluster\$1 or element\$1))) and (((second and first and third) adj (semiconductor (film\$1 or layer\$1)))) and amorphous and crystall\$4 and (barrier adj (layer or film)) and (inert adj gas\$2)and getter\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/06/05 18:37
	3	(metallic or(metal\$4 adj (cluster\$1 or element\$1))) and ((second and first) adj (film\$1 or layer\$1)) and amorphous and crystall\$4 and (barrier adj (layer or film)) and (inert adj gas\$2)and getter\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/06/05 18:39
	1	((((438/143) or (438/149) or (438/310) or (438/311) or (438/471) or (438/482) or (438/488) or (438/761) or (438/762) or (438/763) or (438/764) or (438/765) or (438/778)).CCLS.) and metallic and ((second and first) adj (semiconductor (film\$1 or layer\$1))) and amorphous and crystall\$4 and (barrier adj (layer or film)) and (inert adj gas\$2)) and getter\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/06/05 18:41
	15096	getter\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/06/05 20:26
	2810	((metallic or(metal\$4 adj (cluster\$1 or element\$1)))) and getter\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/06/05 18:43
	12	(((metallic or(metal\$4 adj (cluster\$1 or element\$1)))) and getter\$3) and amorphous and crystall\$4 and (barrier adj (layer or film)) and (inert adj gas\$2)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/06/05 18:44
	0	(metallic or(metal\$4 or (metal\$4 adj (cluster\$1 or element\$1)))) and ((second and first and third) adj (semiconductor (film\$1 or layer\$1))) and amorphous and crystall\$4 and (barrier adj (layer or film)) and (inert adj gas\$2)and getter\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/06/05 18:52
	0	(metallic or(metal\$4 or (metal\$4 adj (cluster\$1 or element\$1)))) and ((first and second and third) adj (film\$1 or layer\$1)) and amorphous and crystall\$4 and (barrier adj (layer or film)) and (inert adj gas\$2)and getter\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/06/05 18:54
	5	(metallic or(metal\$4 or (metal\$4 adj (cluster\$1 or element\$1)))) and (first adj (film\$1 or layer\$1)) and amorphous and crystall\$4 and (barrier adj (layer or film)) and (inert adj gas\$2)and getter\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/06/05 20:27
	9	(metallic or(metal\$4 or (metal\$4 adj (cluster\$1 or element\$1)))) and (semiconductor adj (film\$1 or layer\$1)) and amorphous and crystall\$4 and (barrier adj (layer or film)) and (inert adj gas\$2)and getter\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/06/05 18:56

-	8595	(metallic or(metal\$4 or (metal\$4 adj (cluster\$1 or element\$1))) and getter\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/06/05 20:28
-	0	(metallic or(metal\$4 or (metal\$4 adj (cluster\$1 or element\$1)))) and getter\$3 and amorphous	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/06/05 20:31
-	1086	(metallic or(metal\$4 or (metal\$4 adj (cluster\$1 or element\$1)))) and getter\$3 and amorphous	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/06/05 20:32
-	715	((metallic or(metal\$4 or (metal\$4 adj (cluster\$1 or element\$1)))) and getter\$3 and amorphous) and crystall\$4	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/06/05 20:32
-	189	((metallic or(metal\$4 or (metal\$4 adj (cluster\$1 or element\$1)))) and getter\$3 and amorphous) and crystall\$4) and inert adj gas\$2	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/06/05 20:33
-	14	(((((metallic or(metal\$4 or (metal\$4 adj (cluster\$1 or element\$1)))) and getter\$3 and amorphous) and crystall\$4) and inert adj gas\$2) and (barrier adj (layer or film)))	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/06/05 20:33
-	6	((("6087679") or ("6077731") or ("6147667") or ("6133073") or ("6168980") or ("6107639")).PN.	USPAT; US-PGPUB	2002/06/07 13:54
-	4	((("6087679") or ("6077731") or ("6147667") or ("6133073") or ("6168980") or ("6107639")).PN.) and barrier	USPAT; US-PGPUB	2002/06/07 14:52
-	3	(((((("6087679") or ("6077731") or ("6147667") or ("6133073") or ("6168980") or ("6107639")).PN.) and barrier) and block\$3	USPAT; US-PGPUB	2002/06/07 14:51
-	1	((("6396147").PN.) and barrier	USPAT; US-PGPUB	2002/06/07 14:53
-	1	((("6396147").PN.) and barrier) and amorphous	USPAT; US-PGPUB	2002/06/07 14:53
-	1	(((((("6396147").PN.) and barrier) and amorphous) and crystal\$4	USPAT; US-PGPUB	2002/06/07 14:53
-	1	(((((("6396147").PN.) and barrier) and amorphous) and crystal\$4) and inert adj gas	USPAT; US-PGPUB	2002/06/07 14:54
-	1	((((((("6396147").PN.) and barrier) and amorphous) and crystal\$4) and inert adj gas) and getter\$3	USPAT; US-PGPUB	2002/06/07 14:54
-	835	((438/166) or (438/486) or (438/476)).CCLS.	USPAT; US-PGPUB	2002/06/08 13:58
-	215	((438/166) or (438/486) or (438/476)).CCLS.) and getter\$3	USPAT; US-PGPUB	2002/06/08 14:43
-	28	((((438/166) or (438/486) or (438/476)).CCLS.) and getter\$3) and (inert or noble) adj gas	USPAT; US-PGPUB	2002/06/08 14:43
-	9	(((((438/166) or (438/486) or (438/476)).CCLS.) and getter\$3) and (inert or noble) adj gas) and barrier	USPAT; US-PGPUB	2002/06/08 14:44
-	0	("FOR0146").PN.	USPAT; US-PGPUB	2002/06/08 14:08
-	0	("FOR0146").PN.	JPO; DERWENT; IBM_TDB	2002/06/10 19:02
-	96	(((((438/166) or (438/486) or (438/476)).CCLS.) and getter\$3) and amorphous	USPAT; US-PGPUB	2002/06/08 14:43

-	16	(((((438/166) or (438/486) or (438/476)).CCLS.) and getter\$3) and amorphous) and (inert or noble) adj gas	USPAT; US-PGPUB	2002/06/08 14:43
-	6	(((((438/166) or (438/486) or (438/476)).CCLS.) and getter\$3) and amorphous) and (inert or noble) adj gas) and barrier	USPAT; US-PGPUB	2002/06/08 14:44
-	1	("6396147").PN.	USPAT; US-PGPUB	2002/06/10 17:37
-	1	("5789284").PN.	USPAT; US-PGPUB	2002/06/10 17:37
-	0	("FOR 146").PN.	JPO; DERWENT; IBM TDB	2002/06/10 19:04
-	9	(metallic or(metal\$4 adj (cluster\$1 or element\$1))) with (anneal\$ with (electric adj current))	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB	2002/06/21 16:53
-	1	("20020086469").PN.	USPAT; US-PGPUB	2003/06/02 17:02
-	19346	kim.in.	USPAT; US-PGPUB	2003/06/02 17:02
-	8679	getter\$3	USPAT; US-PGPUB	2003/06/02 17:03
-	44	kim.in. and getter\$3	USPAT; US-PGPUB	2003/06/02 17:03
-	16337	getter\$3 or getter	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB	2003/06/03 13:50
-	2089	"semiconductor energy laboratory"	USPAT; US-PGPUB	2003/06/03 13:52
-	19706	tft or (thin adj film adj transistor)	USPAT; US-PGPUB	2003/06/03 13:58
-	641	(getter\$3 or getter) and (tft or (thin adj film adj transistor))	USPAT; US-PGPUB	2003/06/03 14:00
-	248	((getter\$3 or getter) and (tft or (thin adj film adj transistor))) not "semiconductor energy laboratory"	USPAT; US-PGPUB	2003/06/03 14:00
-	40	((((getter\$3 or getter) and (tft or (thin adj film adj transistor))) not "semiconductor energy laboratory") and @ad<20010216) and 438/\$.ccls.	USPAT; US-PGPUB	2003/06/03 14:02
-	111	((getter\$3 or getter) and (tft or (thin adj film adj transistor))) not "semiconductor energy laboratory") and @ad<20010216	USPAT; US-PGPUB	2003/06/03 18:03
-	32627	ozone	USPAT; US-PGPUB	2003/06/03 18:02
-	110	((getter\$3 or getter) and (tft or (thin adj film adj transistor))) not "semiconductor energy laboratory") and @ad<20010216	USPAT; US-PGPUB	2003/06/03 18:03
-	3	ozone and (((getter\$3 or getter) and (tft or (thin adj film adj transistor))) not "semiconductor energy laboratory") and @ad<20010216)	USPAT; US-PGPUB	2003/06/03 18:12
-	66319	deioniz\$3	USPAT; US-PGPUB	2003/06/03 18:13
-	0	((((getter\$3 or getter) and (tft or (thin adj film adj transistor))) not "semiconductor energy laboratory") and @ad<20010216) and deioniz\$3	USPAT; US-PGPUB	2003/06/03 18:13
-	556	((483/471) or (438/472) or (438/473) or (438/474) or (438/475) or (438/476) or (438/477)).CCLS.	USPAT; US-PGPUB	2003/06/06 12:37
-	18319	amorphous\$3 and crystal\$8 and laser	USPAT; US-PGPUB	2003/06/06 12:38

-	692277	barrier or (oxide or nitride or oxynitride)	USPAT; US-PGPUB	2003/06/06 12:38
-	61	((483/471) or (438/472) or (438/473) or (438/474) or (438/475) or (438/476) or (438/477)).CCLS.) and (amorphous\$3 and crystal\$8 and laser)	USPAT; US-PGPUB	2003/06/06 12:38
-	57	((483/471) or (438/472) or (438/473) or (438/474) or (438/475) or (438/476) or (438/477)).CCLS.) and (amorphous\$3 and crystal\$8 and laser)) and (barrier or (oxide or nitride or oxynitride))	USPAT; US-PGPUB	2003/06/06 14:19
-	57	((483/471) or (438/472) or (438/473) or (438/474) or (438/475) or (438/476) or (438/477)).CCLS.) and (amorphous\$3 and crystal\$8 and laser)) and (barrier or (oxide or nitride or oxynitride))	USPAT; US-PGPUB	2003/06/06 14:22
-	5183	catalytic near metal	USPAT; US-PGPUB	2003/06/06 14:24
-	1	((483/471) or (438/472) or (438/473) or (438/474) or (438/475) or (438/476) or (438/477)).CCLS.) and (amorphous\$3 and crystal\$8 and laser)) and (barrier or (oxide or nitride or oxynitride)) and (catalytic near metal)	USPAT; US-PGPUB	2003/06/06 14:21
-	112610	amorphous\$3	USPAT; US-PGPUB	2003/06/06 14:22
-	505011	crystal\$8	USPAT; US-PGPUB	2003/06/06 14:23
-	260315	laser	USPAT; US-PGPUB	2003/06/06 14:23
-	692277	barrier or (oxide or nitride or oxynitride)	USPAT; US-PGPUB	2003/06/06 15:22
-	28707	(catalytic or cluster or element) near metal	USPAT; US-PGPUB	2003/06/06 14:25
-	2556	crystal\$8 same ((catalytic or cluster or element) near metal)	USPAT; US-PGPUB	2003/06/06 14:25
-	1285	(crystal\$8 same ((catalytic or cluster or element) near metal)) and amorphous\$3	USPAT; US-PGPUB	2003/06/06 14:25
-	709	((crystal\$8 same ((catalytic or cluster or element) near metal)) and amorphous\$3) and laser	USPAT; US-PGPUB	2003/06/06 14:26
-	676	((crystal\$8 same ((catalytic or cluster or element) near metal)) and amorphous\$3) and laser) and (barrier or (oxide or nitride or oxynitride))	USPAT; US-PGPUB	2003/06/06 14:26
-	8423	getter or gettering	USPAT; US-PGPUB	2003/06/06 14:26
-	233	((crystal\$8 same ((catalytic or cluster or element) near metal)) and amorphous\$3) and laser) and (barrier or (oxide or nitride or oxynitride)) and (getter or gettering)	USPAT; US-PGPUB	2003/06/06 14:45
-	5636607	((fe or iron) or(co or cobalt) or (ni or nickel) or (cu or copper) or (ru or ruthenium) or (rh or rhodium) or (pd or palladium) or (os or osmium) or (ir or iridium) or (pt or platinum) or (au or gold)	USPAT; US-PGPUB	2003/06/06 14:50
-	124463	((fe or iron) or(co or cobalt) or (ni or nickel) or (cu or copper) or (ru or ruthenium) or (rh or rhodium) or (pd or palladium) or (os or osmium) or (ir or iridium) or (pt or platinum) or (au or gold)) same crystal\$8	USPAT; US-PGPUB	2003/06/06 14:51
-	29298	amorphous\$3 and ((fe or iron) or(co or cobalt) or (ni or nickel) or (cu or copper) or (ru or ruthenium) or (rh or rhodium) or (pd or palladium) or (os or osmium) or (ir or iridium) or (pt or platinum) or (au or gold)) same crystal\$8)	USPAT; US-PGPUB	2003/06/06 14:51

-	22525	(amorphous\$3 and (((fe or iron) or(co or cobalt) or (ni or nickel).or (cu or copper) or (ru or ruthenium) or (rh or rhodium) or (pd or palladium) or (os or osmium) or (ir or iridium) or (pt or platinum) or (au or gold)) same crystal\$8)) and (barrier or (oxide or nitride or oxynitride)))	USPAT; US-PGPUB	2003/06/06 14:51
-	690	((amorphous\$3 and (((fe or iron) or(co or cobalt) or (ni or nickel) or (cu or copper) or (ru or ruthenium) or (rh or rhodium) or (pd or palladium) or (os or osmium) or (ir or iridium) or (pt or platinum) or (au or gold)) same crystal\$8)) and (barrier or (oxide or nitride or oxynitride))) and (getter or gettering)	USPAT; US-PGPUB	2003/06/06 14:52
-	531	((amorphous\$3 and (((fe or iron) or(co or cobalt) or (ni or nickel) or (cu or copper) or (ru or ruthenium) or (rh or rhodium) or (pd or palladium) or (os or osmium) or (ir or iridium) or (pt or platinum) or (au or gold)) same crystal\$8)) and (barrier or (oxide or nitride or oxynitride))) and (getter or gettering)) and laser	USPAT; US-PGPUB	2003/06/06 14:52
-	133656	(barrier or (oxide or nitride or oxynitride)) near (film or layer)	USPAT; US-PGPUB	2003/06/06 15:23
-	14785	((barrier or (oxide or nitride or oxynitride)) near (film or layer)) and (((fe or iron) or(co or cobalt) or (ni or nickel) or (cu or copper) or (ru or ruthenium) or (rh or rhodium) or (pd or palladium) or (os or osmium) or (ir or iridium) or (pt or platinum) or (au or gold)) same crystal\$8)	USPAT; US-PGPUB	2003/06/06 15:23
-	6367	((barrier or (oxide or nitride or oxynitride)) near (film or layer)) and (((fe or iron) or(co or cobalt) or (ni or nickel) or (cu or copper) or (ru or ruthenium) or (rh or rhodium) or (pd or palladium) or (os or osmium) or (ir or iridium) or (pt or platinum) or (au or gold)) same crystal\$8)) and amorphous\$3	USPAT; US-PGPUB	2003/06/06 15:24
-	614	((barrier or (oxide or nitride or oxynitride)) near (film or layer)) and (((fe or iron) or(co or cobalt) or (ni or nickel) or (cu or copper) or (ru or ruthenium) or (rh or rhodium) or (pd or palladium) or (os or osmium) or (ir or iridium) or (pt or platinum) or (au or gold)) same crystal\$8)) and amorphous\$3) and (getter or gettering)	USPAT; US-PGPUB	2003/06/06 15:24
-	511	((barrier or (oxide or nitride or oxynitride)) near (film or layer)) and (((fe or iron) or(co or cobalt) or (ni or nickel) or (cu or copper) or (ru or ruthenium) or (rh or rhodium) or (pd or palladium) or (os or osmium) or (ir or iridium) or (pt or platinum) or (au or gold)) same crystal\$8)) and amorphous\$3) and (getter or gettering)) and laser	USPAT; US-PGPUB	2003/06/06 15:24
-	44	5821138.URPN.	USPAT	2003/06/06 15:49
-	5	("4838654" "5376561" "5488012" "5529937" "5618739").PN.	USPAT	2003/06/06 15:54
-	13	("4024626" "4759610" "4771016" "4838654" "4885616" "4906587" "4968638" "4980308" "4984033" "5110748" "5206749" "5256562" "5455187").PN.	USPAT	2003/06/06 15:54

-	13	("4024626" "4759610" "4771016" "4838654" "4885616" "4906587" "4968638" "4980308" "4984033" "5110748" "5206749" "5256562" "5455187").PN.	USPAT	2003/06/06 15:54
-	0	6337259.URPN.	USPAT	2003/06/06 16:14
-	1	"6140166".PN.	USPAT	2003/06/06 16:14
-	0	6337259.URPN.	USPAT	2003/06/06 16:15
-	0	6376336.URPN.	USPAT	2003/06/06 17:06
-	30	("3936858" "4498227" "5194395" "5244819" "5272104" "5443661" "5453153" "5501993" "5646053" "5753560" "5773152" "5795809" "5807771" "5818085" "5882990" "5899732" "5926727" "5929508" "5965917" "5976956" "6001711" "6010950" "6013584" "6022793" "6024888" "6083324" "6093624" "6100202" "6114223" "6133123").PN.	USPAT	2003/06/06 17:06
-	1	("5605847").PN.	USPAT; US-PGPUB	2003/06/15 11:57
-	1	("6097037").PN.	USPAT; US-PGPUB	2003/06/15 11:57
-	1	("6337259").PN.	USPAT; US-PGPUB	2003/06/15 12:10
-	36	funai.in.	USPAT; US-PGPUB	2003/06/15 12:10

Search Notes

Application No.

10/020,961

Examiner

Stanetta D. Isaac

Applicant(s)

YAMAZAKI ET AL.

Art Unit

2812

SEARCHED

Class	Subclass	Date	Examiner
438	143	11/20/2003	SDI
438	149	11/20/2003	SDI
438	310	11/20/2003	SDI
438	311	11/20/2003	SDI
438	471	11/20/2003	SDI
438	482	11/20/2003	SDI
438	488	11/20/2003	SDI
438	761	11/20/2003	SDI
438	762	11/20/2003	SDI
438	763	11/20/2003	SDI
438	764	11/20/2003	SDI
438	765	11/20/2003	SDI
438	778	11/20/2003	SDI

INTERFERENCE SEARCHED

Class	Subclass	Date	Examiner

**SEARCH NOTES
(INCLUDING SEARCH STRATEGY)**

	DATE	EXMR
EAST	11/20/2003	SDI

I. Number	Hits	Search Text	DB	Time stamp
6	7255	((438/143) or (438/149) or (438/310) or (438/311) or (438/471) or (438/482) or (438/488) or (438/761) or (438/762) or (438/763) or (438/764) or (438/765) or (438/778)).CCLS.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/11/20 14:20
7	9600	noble near gas	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/11/20 14:17
8	260833	anneal or heat near2 treatment	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/11/20 14:18
9	12617	getter	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/11/20 14:50
10	205	((438/143) or (438/149) or (438/310) or (438/311) or (438/471) or (438/482) or (438/488) or (438/761) or (438/762) or (438/763) or (438/764) or (438/765) or (438/778)).CCLS.) and getter	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/11/20 14:20
11	5	((438/143) or (438/149) or (438/310) or (438/311) or (438/471) or (438/482) or (438/488) or (438/761) or (438/762) or (438/763) or (438/764) or (438/765) or (438/778)).CCLS.) and getter) and (noble near gas)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/11/20 14:19
12	1598	((438/143) or (438/149) or (438/310) or (438/311) or (438/471) or (438/482) or (438/488) or (438/761) or (438/762) or (438/763) or (438/764) or (438/765) or (438/778)).CCLS.) and (anneal or heat near2 treatment)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/11/20 14:21
13	66	((438/143) or (438/149) or (438/310) or (438/311) or (438/471) or (438/482) or (438/488) or (438/761) or (438/762) or (438/763) or (438/764) or (438/765) or (438/778)).CCLS.) and (noble near gas)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/11/20 14:33
14	56	(438/310).CCLS.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/11/20 14:44
15	230662	helium or neon or argon or krypton or xenon	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/11/20 14:45
16	1114	((438/143) or (438/149) or (438/310) or (438/311) or (438/471) or (438/482) or (438/488) or (438/761) or (438/762) or (438/763) or (438/764) or (438/765) or (438/778)).CCLS.) and (helium or neon or argon or krypton or xenon)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/11/20 14:46
17	424	((438/143) or (438/149) or (438/310) or (438/311) or (438/471) or (438/482) or (438/488) or (438/761) or (438/762) or (438/763) or (438/764) or (438/765) or (438/778)).CCLS.) and (helium or neon or argon or krypton or xenon)) and (anneal or heat near2 treatment)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/11/20 14:46

18	30	(((((438/143) or (438/149) or (438/310) or (438/311) or (438/471) or (438/482) or (438/488) or (438/761) or (438/762) or (438/763) or (438/764) or (438/765) or (438/778)).CCLS.) and (helium or neon or argon or krypton or xenon)) and (anneal or heat near2 treatment)) and getter	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/11/20 14:46
19	16843	getter or gettering	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/11/20 14:50
20	3575	(helium or neon or argon or krypton or xenon) and (getter or gettering)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/11/20 14:51
21	1152	((helium or neon or argon or krypton or xenon) and (getter or gettering)) and (anneal or heat near2 treatment)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/11/20 14:51
22	711655	{metallic or(metal\$4 adj {cluster\$1 or element\$1}))	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/11/20 14:58
23	579	((helium or neon or argon or krypton or xenon) and (getter or gettering)) and (anneal or heat near2 treatment)) and ((metallic or(metal\$4 adj {cluster\$1 or element\$1})))	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/11/20 14:59
24	1303417	semiconductor	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/11/20 14:59
25	464	(((((helium or neon or argon or krypton or xenon) and (getter or gettering)) and (anneal or heat near2 treatment)) and ((metallic or(metal\$4 adj {cluster\$1 or element\$1})))) and semiconductor	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/11/20 15:00
26	210593	amorphous	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/11/20 15:00
27	305	(((((helium or neon or argon or krypton or xenon) and (getter or gettering)) and (anneal or heat near2 treatment)) and ((metallic or(metal\$4 adj {cluster\$1 or element\$1})))) and semiconductor) and amorphous	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/11/20 15:36
28	5	("5696003").PN.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/11/20 15:36
29	35	5696003.URPN.	USPAT	2003/11/20 15:37
30	17	("3783049" "4068020" "4309223" "5147826" "5275851" "5278093" "5289030" "5403772" "5481121" "5488000" "5501989" "5508533" "5529937" "5531182" "5534716" "5543352" "5569610").PN.	USPAT	2003/11/20 15:58
	6009	((438/143) or (438/149) or (438/310) or (438/311) or (438/471) or (438/482) or (438/488) or (438/761) or (438/762) or (438/763) or (438/764) or (438/765) or (438/778)).CCLS.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/11/20 14:14

	((438/143) or (438/149) or (438/310) or (438/311) or (438/471) or (438/482) or (438/488) or (438/761) or (438/762) or (438/763) or (438/764) or (438/765) or (438/778)).CCLS.) and metallic and ((second and first) adj (semiconductor (film\$1 or layer\$1))) and amorphous and crystall\$4 and (barrier adj (layer or film)) and (inert adj gas\$2))	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/06/05 18:40
0	((438/143) or (438/149) or (438/310) or (438/311) or (438/471) or (438/482) or (438/488) or (438/761) or (438/762) or (438/763) or (438/764) or (438/765) or (438/778)).CCLS.) with metallic and ((second and first) adj (semiconductor (film\$1 or layer\$1))) and amorphous and crystall\$4 and (barrier adj (layer or film)) and (inert adj gas\$2))	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/06/05 18:16
1	((438/143) or (438/149) or (438/310) or (438/311) or (438/471) or (438/482) or (438/488) or (438/761) or (438/762) or (438/763) or (438/764) or (438/765) or (438/778)).CCLS.) and (metallic or (metal\$4 adj clusters)) and ((second and first) adj (semiconductor (film\$1 or layer\$1))) and amorphous and crystall\$4 and (barrier adj (layer or film)) and (inert adj gas\$2))	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/06/05 18:18
1	((438/143) or (438/149) or (438/310) or (438/311) or (438/471) or (438/482) or (438/488) or (438/761) or (438/762) or (438/763) or (438/764) or (438/765) or (438/778)).CCLS.) and (metallic or (metal\$4 adj (cluster\$1 or element\$1))) and ((second and first) adj (semiconductor (film\$1 or layer\$1))) and amorphous and crystall\$4 and (barrier adj (layer or film)) and (inert adj gas\$2))	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/06/05 18:20
1	((438/143) or (438/149) or (438/310) or (438/311) or (438/471) or (438/482) or (438/488) or (438/761) or (438/762) or (438/763) or (438/764) or (438/765) or (438/778)).CCLS.) and (metallic or (metal\$4 adj (cluster\$1 or element\$1))) and ((second and first) adj (semiconductor (film\$1 or layer\$1))) and amorphous and crystall\$4 and (barrier adj (layer or film)) and (inert adj gas\$2) and getter\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/06/05 18:22
3	(metallic or (metal\$4 adj (cluster\$1 or element\$1))) and ((second and first) adj (semiconductor (film\$1 or layer\$1))) and amorphous and crystall\$4 and (barrier adj (layer or film)) and (inert adj gas\$2) and getter\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/06/05 18:25
647766	(metallic or (metal\$4 adj (cluster\$1 or element\$1)))	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/11/20 14:58
0	(metallic or (metal\$4 adj (cluster\$1 or element\$1))) and ((second and first and third) adj (semiconductor (film\$1 or layer\$1))) and amorphous and crystall\$4 and (barrier adj (layer or film)) and (inert adj gas\$2) and getter\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/06/05 18:48
0	(metallic or (metal\$4 adj (cluster\$1 or element\$1))) and ((second and first and third) adj (semiconductor (film\$1 or layer\$1))) and amorphous and crystall\$4 and (barrier adj (layer or film)) and (inert adj gas\$2 adj element) and getter\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/06/05 18:30

23348	((second and first and third) adj (semiconductor (film\$1 or layer\$1)))	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/06/05 18:34
0	((metallic or(metal\$4 adj (cluster\$1 or element\$1)))) and (((second and first and third) adj (semiconductor (film\$1 or layer\$1)))) and amorphous and crystall\$4 and (barrier adj (layer or film)) and (inert adj gas\$2)and getter\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/06/05 18:37
3	(metallic or(metal\$4 adj (cluster\$1 or element\$1))) and ((second and first) adj (film\$1 or layer\$1)) and amorphous and crystall\$4 and (barrier adj (layer or film)) and (inert adj gas\$2)and getter\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/06/05 18:39
1	((((438/43) or (438/149) or (438/310) or (438/311) or (438/471) or (438/482) or (438/488) or (438/761) or (438/762) or (438/763) or (438/764) or (438/765) or (438/778)).CCLS.) and metallic and ((second and first) adj (semiconductor (film\$1 or layer\$1))) and amorphous and crystall\$4 and (barrier adj (layer or film)) and (inert adj gas\$2)) and getter\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/06/05 18:41
15096	getter\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/06/05 20:26
2810	((metallic or(metal\$4 adj (cluster\$1 or element\$1)))) and getter\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/06/05 18:43
12	((metallic or(metal\$4 adj (cluster\$1 or element\$1)))) and getter\$3) and amorphous and crystall\$4 and (barrier adj (layer or film)) and (inert adj gas\$2)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/06/05 18:44
0	(metallic or(metal\$4 or (metal\$4 adj (cluster\$1 or element\$1)))) and ((second and first and third) adj (semiconductor (film\$1 or layer\$1))) and amorphous and crystall\$4 and (barrier adj (layer or film)) and (inert adj gas\$2)and getter\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/06/05 18:52
0	(metallic or(metal\$4 or (metal\$4 adj (cluster\$1 or element\$1)))) and ((first and second and third) adj (film\$1 or layer\$1)) and amorphous and crystall\$4 and (barrier adj (layer or film)) and (inert adj gas\$2)and getter\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/06/05 18:54
5	(metallic or(metal\$4 or (metal\$4 adj (cluster\$1 or element\$1)))) and (first adj (film\$1 or layer\$1)) and amorphous and crystall\$4 and (barrier adj (layer or film)) and (inert adj gas\$2)and getter\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/06/05 20:27
9	(metallic or(metal\$4 or (metal\$4 adj (cluster\$1 or element\$1)))) and (semiconductor adj (film\$1 or layer\$1)) and amorphous and crystall\$4 and (barrier adj (layer or film)) and (inert adj gas\$2)and getter\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/06/05 18:56
8595	(metallic or(metal\$4 or (metal\$4 adj (cluster\$1 or element\$1)))) and getter\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/06/05 20:28

0	(metallic or (metal\$4 or (metal\$4 adj (cluster\$1 or element\$1)))) and getter\$3 and amorphous	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/06/05 20:31
1086	(metallic or (metal\$4 or (metal\$4 adj (cluster\$1 or element\$1)))) and getter\$3 and amorphous	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/06/05 20:32
715	((metallic or (metal\$4 or (metal\$4 adj (cluster\$1 or element\$1)))) and getter\$3 and amorphous) and crystall\$4	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/06/05 20:32
189	((metallic or (metal\$4 or (metal\$4 adj (cluster\$1 or element\$1)))) and getter\$3 and amorphous) and crystall\$4) and inert adj gas\$2	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/06/05 20:33
14	((metallic or (metal\$4 or (metal\$4 adj (cluster\$1 or element\$1)))) and getter\$3 and amorphous) and crystall\$4) and inert adj gas\$2) and (barrier adj (layer or film))	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/06/05 20:33
6	((("6087679") or ("6077731") or ("6147667") or ("6133073") or ("6168980") or ("6107639")).PN.	USPAT; US-PGPUB	2002/06/07 13:54
4	((("6087679") or ("6077731") or ("6147667") or ("6133073") or ("6168980") or ("6107639")).PN.) and barrier	USPAT; US-PGPUB	2002/06/07 14:52
3	((("6087679") or ("6077731") or ("6147667") or ("6133073") or ("6168980") or ("6107639")).PN.) and barrier) and block\$3	USPAT; US-PGPUB	2002/06/07 14:51
1	((("6396147").PN.) and barrier	USPAT; US-PGPUB	2002/06/07 14:53
1	((("6396147").PN.) and barrier) and amorphous	USPAT; US-PGPUB	2002/06/07 14:53
1	((("6396147").PN.) and barrier) and amorphous) and crystal\$4	USPAT; US-PGPUB	2002/06/07 14:53
1	((("6396147").PN.) and barrier) and amorphous) and crystal\$4) and inert adj gas	USPAT; US-PGPUB	2002/06/07 14:54
1	((("6396147").PN.) and barrier) and amorphous) and crystal\$4) and inert adj gas) and getter\$3	USPAT; US-PGPUB	2002/06/07 14:54
835	((438/166) or (438/486) or (438/476)).CCLS.	USPAT; US-PGPUB	2002/06/08 13:58
215	((438/166) or (438/486) or (438/476)).CCLS.) and getter\$3	USPAT; US-PGPUB	2002/06/08 14:43
28	((438/166) or (438/486) or (438/476)).CCLS.) and getter\$3) and (inert or noble) adj gas	USPAT; US-PGPUB	2002/06/08 14:43
9	((438/166) or (438/486) or (438/476)).CCLS.) and getter\$3) and (inert or noble) adj gas) and barrier	USPAT; US-PGPUB	2002/06/08 14:44
0	("FOR0146").PN.	USPAT; US-PGPUB	2002/06/08 14:08
0	("FOR0146").PN.	JPO; DERWENT; IBM_TDB	2002/06/10 19:02
96	((438/166) or (438/486) or (438/476)).CCLS.) and getter\$3) and amorphous	USPAT; US-PGPUB	2002/06/08 14:43
16	((438/166) or (438/486) or (438/476)).CCLS.) and getter\$3) and amorphous) and (inert or noble) adj gas	USPAT; US-PGPUB	2002/06/08 14:43

0	(metallic or (metal\$4 or (metal\$4 adj (cluster\$1 or element\$1)))) and getter\$3 and amorphous	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/06/05 20:31
1086	(metallic or (metal\$4 or (metal\$4 adj (cluster\$1 or element\$1)))) and getter\$3 and amorphous	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/06/05 20:32
715	((metallic or (metal\$4 or (metal\$4 adj (cluster\$1 or element\$1)))) and getter\$3 and amorphous) and crystal\$4	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/06/05 20:32
189	((metallic or (metal\$4 or (metal\$4 adj (cluster\$1 or element\$1)))) and getter\$3 and amorphous) and crystal\$4) and inert adj gas\$2	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/06/05 20:33
14	((metallic or (metal\$4 or (metal\$4 adj (cluster\$1 or element\$1)))) and getter\$3 and amorphous) and crystal\$4) and inert adj gas\$2) and (barrier adj (layer or film))	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/06/05 20:33
6	((("6087679") or ("6077731") or ("6147667") or ("6133073") or ("6168980") or ("6107639")).PN.	USPAT; US-PGPUB	2002/06/07 13:54
4	((("6087679") or ("6077731") or ("6147667") or ("6133073") or ("6168980") or ("6107639")).PN.) and barrier	USPAT; US-PGPUB	2002/06/07 14:52
3	((("6087679") or ("6077731") or ("6147667") or ("6133073") or ("6168980") or ("6107639")).PN.) and barrier) and block\$3	USPAT; US-PGPUB	2002/06/07 14:51
1	((("6396147").PN.) and barrier	USPAT; US-PGPUB	2002/06/07 14:53
1	((("6396147").PN.) and barrier) and amorphous	USPAT; US-PGPUB	2002/06/07 14:53
1	((("6396147").PN.) and barrier) and amorphous) and crystal\$4	USPAT; US-PGPUB	2002/06/07 14:53
1	((("6396147").PN.) and barrier) and amorphous) and crystal\$4) and inert adj gas	USPAT; US-PGPUB	2002/06/07 14:54
1	((("6396147").PN.) and barrier) and amorphous) and crystal\$4) and inert adj gas) and getter\$3	USPAT; US-PGPUB	2002/06/07 14:54
835	((438/166) or (438/486) or (438/476)).CCLS.	USPAT; US-PGPUB	2002/06/08 13:58
215	((438/166) or (438/486) or (438/476)).CCLS.) and getter\$3	USPAT; US-PGPUB	2002/06/08 14:43
28	((438/166) or (438/486) or (438/476)).CCLS.) and getter\$3) and (inert or noble) adj gas	USPAT; US-PGPUB	2002/06/08 14:43
9	((438/166) or (438/486) or (438/476)).CCLS.) and getter\$3) and (inert or noble) adj gas) and barrier	USPAT; US-PGPUB	2002/06/08 14:44
0	("FOR0146").PN.	USPAT; US-PGPUB	2002/06/08 14:08
0	("FOR0146").PN.	JPO; DERWENT; IBM_TDB	2002/06/10 19:02
96	((438/166) or (438/486) or (438/476)).CCLS.) and getter\$3) and amorphous	USPAT; US-PGPUB	2002/06/08 14:43
16	((438/166) or (438/486) or (438/476)).CCLS.) and getter\$3) and amorphous) and (inert or noble) adj gas	USPAT; US-PGPUB	2002/06/08 14:43

61	((483/471) or (438/472) or (438/473) or (438/474) or (438/475) or (438/476) or (438/477)).CCL.S.) and (amorphous\$3 and crystal\$8 and laser)	USPAT; US-PGPUB	2003/06/06 12:38
57	((483/471) or (438/472) or (438/473) or (438/474) or (438/475) or (438/476) or (438/477)).CCL.S.) and (amorphous\$3 and crystal\$8 and laser)) and (barrier or (oxide or nitride or oxynitride))	USPAT; US-PGPUB	2003/06/06 14:19
57	((483/471) or (438/472) or (438/473) or (438/474) or (438/475) or (438/476) or (438/477)).CCL.S.) and (amorphous\$3 and crystal\$8 and laser)) and (barrier or (oxide or nitride or oxynitride))	USPAT; US-PGPUB	2003/06/06 14:22
5183	catalytic near metal	USPAT; US-PGPUB	2003/06/06 14:24
1	((483/471) or (438/472) or (438/473) or (438/474) or (438/475) or (438/476) or (438/477)).CCL.S.) and (amorphous\$3 and crystal\$8 and laser)) and (barrier or (oxide or nitride or oxynitride))) and (catalytic near metal)	USPAT; US-PGPUB	2003/06/06 14:21
112610	amorphous\$3	USPAT; US-PGPUB	2003/06/06 14:22
505011	crystal\$8	USPAT; US-PGPUB	2003/06/06 14:23
260315	laser	USPAT; US-PGPUB	2003/06/06 14:23
692277	barrier or (oxide or nitride or oxynitride)	USPAT; US-PGPUB	2003/06/06 15:22
28707	(catalytic or cluster or element) near metal	USPAT; US-PGPUB	2003/06/06 14:25
2556	crystal\$8 same ((catalytic or cluster or element) near metal)	USPAT; US-PGPUB	2003/06/06 14:25
1285	(crystal\$8 same ((catalytic or cluster or element) near metal)) and amorphous\$3	USPAT; US-PGPUB	2003/06/06 14:25
709	((crystal\$8 same ((catalytic or cluster or element) near metal)) and amorphous\$3) and laser	USPAT; US-PGPUB	2003/06/06 14:26
676	((crystal\$8 same ((catalytic or cluster or element) near metal)) and amorphous\$3) and laser) and (barrier or (oxide or nitride or oxynitride))	USPAT; US-PGPUB	2003/06/06 14:26
8423	getter or gettering	USPAT; US-PGPUB	2003/06/06 14:26
233	((crystal\$8 same ((catalytic or cluster or element) near metal)) and amorphous\$3) and laser) and (barrier or (oxide or nitride or oxynitride))) and (getter or gettering)	USPAT; US-PGPUB	2003/06/06 14:45
5636607	((fe or iron) or (co or cobalt) or (ni or nickel) or (cu or copper) or (ru or ruthenium) or (rh or rhodium) or (pd or palladium) or (os or osmium) or (ir or iridium) or (pt or platinum) or (au or gold))	USPAT; US-PGPUB	2003/06/06 14:50
124463	((fe or iron) or (co or cobalt) or (ni or nickel) or (cu or copper) or (ru or ruthenium) or (rh or rhodium) or (pd or palladium) or (os or osmium) or (ir or iridium) or (pt or platinum) or (au or gold)) same crystal\$8	USPAT; US-PGPUB	2003/06/06 14:51
29298	amorphous\$3 and (((fe or iron) or (co or cobalt) or (ni or nickel) or (cu or copper) or (ru or ruthenium) or (rh or rhodium) or (pd or palladium) or (os or osmium) or (ir or iridium) or (pt or platinum) or (au or gold)) same crystal\$8)	USPAT; US-PGPUB	2003/06/06 14:51

22525	(amorphous\$3 and (((fe or iron) or (co or cobalt) or (ni or nickel) or (cu or copper) or (ru or ruthenium) or (rh or rhodium) or (pd or palladium) or (os or osmium) or (ir or iridium) or (pt or platinum) or (au or gold)) same crystal\$8)) and (barrier or (oxide or nitride or oxynitride)))	USPAT; US-PGPUB	2003/06/06 14:51
690	((amorphous\$3 and (((fe or iron) or (co or cobalt) or (ni or nickel) or (cu or copper) or (ru or ruthenium) or (rh or rhodium) or (pd or palladium) or (os or osmium) or (ir or iridium) or (pt or platinum) or (au or gold)) same crystal\$8)) and (barrier or (oxide or nitride or oxynitride))) and (getter or gettering))	USPAT; US-PGPUB	2003/06/06 14:52
531	((amorphous\$3 and (((fe or iron) or (co or cobalt) or (ni or nickel) or (cu or copper) or (ru or ruthenium) or (rh or rhodium) or (pd or palladium) or (os or osmium) or (ir or iridium) or (pt or platinum) or (au or gold)) same crystal\$8)) and (barrier or (oxide or nitride or oxynitride))) and (getter or gettering)) and laser	USPAT; US-PGPUB	2003/06/06 14:52
133656	(barrier or (oxide or nitride or oxynitride)) near (film or layer)	USPAT; US-PGPUB	2003/06/06 15:23
14785	((barrier or (oxide or nitride or oxynitride)) near (film or layer)) and (((fe or iron) or (co or cobalt) or (ni or nickel) or (cu or copper) or (ru or ruthenium) or (rh or rhodium) or (pd or palladium) or (os or osmium) or (ir or iridium) or (pt or platinum) or (au or gold)) same crystal\$8)	USPAT; US-PGPUB	2003/06/06 15:23
6367	((barrier or (oxide or nitride or oxynitride)) near (film or layer)) and (((fe or iron) or (co or cobalt) or (ni or nickel) or (cu or copper) or (ru or ruthenium) or (rh or rhodium) or (pd or palladium) or (os or osmium) or (ir or iridium) or (pt or platinum) or (au or gold)) same crystal\$8)) and amorphous\$3	USPAT; US-PGPUB	2003/06/06 15:24
614	((barrier or (oxide or nitride or oxynitride)) near (film or layer)) and (((fe or iron) or (co or cobalt) or (ni or nickel) or (cu or copper) or (ru or ruthenium) or (rh or rhodium) or (pd or palladium) or (os or osmium) or (ir or iridium) or (pt or platinum) or (au or gold)) same crystal\$8)) and amorphous\$3) and (getter or gettering)	USPAT; US-PGPUB	2003/06/06 15:24
511	((barrier or (oxide or nitride or oxynitride)) near (film or layer)) and (((fe or iron) or (co or cobalt) or (ni or nickel) or (cu or copper) or (ru or ruthenium) or (rh or rhodium) or (pd or palladium) or (os or osmium) or (ir or iridium) or (pt or platinum) or (au or gold)) same crystal\$8)) and amorphous\$3) and (getter or gettering)) and laser	USPAT; US-PGPUB	2003/06/06 15:24
44	5821138.URPN.	USPAT	2003/06/06 15:49
5	("4838654" "5376561" "5488012" "5529937" "5618739").PN.	USPAT	2003/06/06 15:54
13	("4024626" "4759610" "4771016" "4838654" "4885616" "4906587" "4968638" "4980308" "4984033" "5110748" "5206749" "5256562" "5455187").PN.	USPAT	2003/06/06 15:54

13	("4024626" "4759610" "4771016" "4838654" "4885616" "4906587" "4968638" "4980308" "4984033" "5110748" "5206749" "5256562" "5455187").PN.	USPAT	2003/06/06 15:54
0	6337259.URPN.	USPAT	2003/06/06 16:14
1	"6140166".PN.	USPAT	2003/06/06 16:14
0	6337259.URPN.	USPAT	2003/06/06 16:15
0	6376336.URPN.	USPAT	2003/06/06 17:06
30	("3936858" "4498227" "5194395" "5244819" "5272104" "5443661" "5453153" "5501993" "5646053" "5753560" "5773152" "5795809" "5807771" "5818085" "5882990" "5899732" "5926727" "5929508" "5965917" "5976956" "6001711" "6010950" "6013584" "6022793" "6024888" "6083324" "6093624" "6100202" "6114223" "6133123").PN.	USPAT	2003/06/06 17:06
1	("5605847").PN.	USPAT; US-PGPUB	2003/06/15 11:57
1	("6097037").PN.	USPAT; US-PGPUB	2003/06/15 11:57
1	("6337259").PN.	USPAT; US-PGPUB	2003/06/15 12:10
36	funai.in.	USPAT; US-PGPUB	2003/06/15 16:13
1	("5550070").PN.	USPAT; US-PGPUB	2003/06/15 16:49

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